

(FILE 'HOME' ENTERED AT 16:34:28 ON 10 APR 2000)

FILE 'MEDLINE, BIOSIS, EMBASE, CAPLUS' ENTERED AT 16:34:40 ON 10 APR 2000

L1	895 S ADENINE NUCLEOTIDE TRANSLOCATOR
L2	184 S ANTL
L3	10 S ANTL AND FUSION
L4	4 DUP REM L3 (6 DUPLICATES REMOVED)
L5	2 S ANTL AND FUSION
L6	155 S ANTL
L7	59 DUP REM L6 (90 DUPLICATES REMOVED)
L8	7 S L7 AND MEMBRANE
L9	97 S ANTL AND EXPRESS?
L10	22 S ANTL AND CDNA
L11	8 DUP REM L10 (14 DUPLICATES REMOVED)
L12	7 S ANTL AND PURIFICATION
L13	113 S ANTL
L14	0 S ANTL AND PURIFICATION
L15	0 S ANTL AND PURIF?
L16	4 S ANTL AND CDNA
L17	0 S ANTL 5A EXPRESS?
L18	0 S ANTL 5A PROTEIN
L19	21 S L1 AND FUSION
L20	9 DUP REM L19 (12 DUPLICATES REMOVED)

EAST

	Type	L #	Hit s	Search Text	DBs	Time Stamp
1	ERS	L1	11	adenine 4p nucleotide adj translouder	USPAT; EPO; Derwent	2000/04/10 17:11
2	ERS	L2	11	anti and protein	USPAT; EPO; Derwent	2000/04/10 17:11
3	ERS	L3	3	ant2 and protein	USPAT; EPO; Derwent	2000/04/10 17:11
4	ERS	L4	2	ant3 and protein	USPAT; EPO; Derwent	2000/04/10 17:11

LE ANSWER 7 OF 7 CAPLUS COPYRIGHT 2000 ACS

AN 1997:073204 CAPLUS

BN 127:342467

TI Somatic cell mapping of the adenine nucleotide translocator gene family  
in

cattle

AU Li, Lei; Womack, James E.

CS Department Veterinary Pathobiology, Texas A&M University, College  
Station,

TX, 77843, USA

SO Mamm. Genome (1997), 8(10), 773-774

CODEN: MAMGEC; ISSN: 0938-8990

PB Springer

PT Journal

LA English

AB Adenine nucleotide translocator [ADP/ATP translocase, (ANT), or ADP/ATP  
carrier (AAC)] is the most abundant mitochondrial protein. As an  
integral

component of the inner mitochondrial membrane, it catalyzes the  
exchange of intramitochondrial ATP for cytoplasmic ADP, consequently  
controlling the ATP supply of the cell. Its central role in cellular  
energy supply suggests that ANT might be regulated in different tissues

to fit tissue specific functional and developmental requirements. The  
authors assigned the bovine adenine nucleotide translocator ANT3 gene to  
chromosome X which segregated concordantly with **ANT2**. Both  
**ANT2** and ANT3 have been mapped on human chromosome X. However,  
ANT3 escapes X inactivation on the pseudautosomal region of Xp22.3 in  
human, whereas **ANT2** is subjected to X-inactivation and localized  
on Xq13-q26 (Chen et al. 1990). Further localization of these genes will  
help clarify the evolutionary history of mammalian sex chromosomes.

LA ANSWER 6 OF 7 CAPLUS COPYRIGHT 2000 ACS

AN 1999:695536 CAPLUS

TI Stress sensitive B encodes an adenine nucleotide translocase in *Drosophila*

*melanogaster*

AU Zhang, Yong Q.; Roote, John; Brogna, Saverio; Davis, Andrew W.; Barbash, Daniel A.; Nash, David; Ashburner, Michael

AD Department of Genetics, University of Cambridge, Cambridge, CB2 3EH, UK

JO Genetics (1999), 153(2), 391-393

CODEN: GENTAE; ISSN: 0016-6731

PB Genetics Society of America

BT Journal

LA English

AB Adenine nucleotide translocases (ANT) are required for the exchange of ADP

and ATP across the inner mitochondrial **membrane**. They are essential for life, and most eukaryotes have at least two different Ant genes. Only one gene had been described from *Drosophila*, and this had

not

been characterized genetically. We show that mutations in this gene correspond to the previously described *loci*, *sesB* and *141/9Ed*. Immediately adjacent to this gene is another encoding a second ANT protein, which has 78% identity to that encoded by *sesB/141/9Ed*. These two genes are transcribed from a common promoter, and their mRNAs are produced by differential splicing. Hutter and Karch suggested that the *sesB* ANT gene corresponded to *Hmx*, a gene identified by an allele that rescues otherwise inviable interspecific hybrids between *Drosophila melanogaster* and its sibling species. This hypothesis is not supported

by

LR ANSWER 4 OF 7 MEDLINE  
 AN 92340491 MEDLINE  
 DN 92340491  
 TI Differential expression of adenine nucleotide translocator isoforms in mammalian tissues and during muscle cell differentiation.  
 AU Stepien G; Torroni A; Chung A B; Hodge J A; Wallace D C  
 CS Department of Genetics and Molecular Medicine, Emory University School of Medicine, Atlanta, Georgia 30322..  
 NC HL-45572 (NHLBI)  
 NS-21328 (NINDS)  
 JO JOURNAL OF BIOLOGICAL CHEMISTRY, (1992 Jul 25) 267 (21) 14592-7.  
 Journal code: HIV. ISSN: 0021-9258.  
 JY United States  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Priority Journals; Cancer Journals  
 EM 199210  
 AB The adenine nucleotide translocator (ANT) catalyzes the exchange of ADP and ATP across the mitochondrial internal **membrane**. Its three isoforms, **ANT1**, **ANT2**, and **ANT3** are coded by differentially regulated nuclear genes. The patterns of expression of these genes in human, bovine, and mouse tissue are similar. **ANT1** is highly expressed in heart and skeletal muscle and is induced during myoblast differentiation. It is coordinately regulated with the nuclear gene for the mitochondrial ATP synthase beta subunit, with which it shares the positive muscle cis element, the OXBOX. **ANT2** is either absent or weakly expressed in all tissues. **ANT3** is ubiquitously expressed in all tissues, and its transcript level is proportional to the level of oxidative metabolism.  
 The tissue-specific expression of the ANT gene family thus provides insight into the molecular basis of the differential reliance of mammalian tissues on oxidative phosphorylation.

L11 ANSWER 7 OF 8 BIOSIS COPYRIGHT 2000 BIOSIS  
 AN 1994:435865 BIOSIS  
 DN PREV199497448865  
 TI A human pseudoautosomal gene ADP/ATP translocase, escapes X-inactivation  
 whereas a homologue on Xq is subject to X-inactivation.  
 AU Schiebel, Katrin (1); Weiss, Birgit (1); Woehrle, Doris; Rappold, Gudrun  
 (1)  
 OS (1) Institut Human Genetics, Univ. of Heidelberg, D-6900 Heidelberg  
 Germany  
 SO Nature Genetics, (1993) Vol. 3, No. 3, pp. 81-87.  
 ISSN: 1061-4036.  
 IT Article  
 LA English  
 AB We report the cloning of a highly conserved pseudoautosomal gene on the  
 human sex chromosomes. A **cdna** clone was selected by  
 crosshybridization with a microdissected clone from the chromosomal  
 subregion Xp22.3. It encodes a previously characterized member of the  
 ADP/ATP translocase family and plays a fundamental role in cellular  
 energy  
 metabolism. This gene, **ANT3**, is located approximately 1,300 kilobases  
 from  
 the telomere, proximal to the pseudoautosomal gene **CSF2RA**, and escapes  
 X-inactivation. Interestingly, a homologue of **ANT3**, **ANT2**, maps  
 to Xq and is subject to X-inactivation. These genes provide the first  
 evidence of two closely related X-chromosomal genes, which show striking  
 differences in their X-inactivation behaviour.

L20 ANSWER 2 OF 9 MEDLINE  
 AN 97284663 MEDLINE  
 DN 97284663  
 TI Thyroid hormone activates transcription from the promoter regions of some human nuclear-encoded genes of the oxidative phosphorylation system.  
 AU Li R; Lubiakova K; Zaid A; Betina S; Fridell E; Nelson B D  
 CS Department of Biochemistry, Stockholm University, Sweden.  
 SO MOLECULAR AND CELLULAR ENDOCRINOLOGY, (1997 Apr 4) 128 (1-2) 69-75.  
 Journal code: E69. ISSN: 0303-7207.  
 CI Ireland  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Priority Journals  
 EM 199710  
 EW 19971002  
 AB Thyroid hormone (T3) modulates the mRNA levels for cytochrome c and the **adenine nucleotide translocator-2 (ANT2)** in adult rat liver. Here we show that T3 activates expression of a reporter gene driven from the human cytochrome c1 and ANT2 promoters transfected into human chorioncarcinoma JEG3 cells. By contrast, the human F1-ATPase beta-subunit promoter responded marginally, thus providing a pattern of differential expression similar to that earlier observed in rats in vivo. T3-activation is dependent on co-expression of the thyroid hormone receptor (TR alpha1). Co-expression of both the TR and RXR receptors had no additional effect. Transient transfection of deletion constructs showed that T3 activation is retained by the proximal regions of the cytochrome c1 and ANT2 promoters, and, in the case of cytochrome c1, is lost upon removal of a fragment containing the transcription initiator ((nucleotides) (nt) + 1 to + 100). The promoter regions supporting T3-activation of the reporter genes appear to lack strong DNA binding